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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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05/14/2001

Hans Kragl

Prinz 109

8165

7590

08/13/2002

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EXAMINER

CUNEO, KAMAND

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

91854779

Applicant(s)

Examiner

Cuneo

Group Art Unit

2827

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on 5/24/02
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-30 is/are pending in the application.
- Of the above claim(s) 7-10, 12-14, 16-19, 22-30 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-6, 11, 20, 21 is/are rejected.
- ☒ Claim(s) 15 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing correction, filed on 5/24/02 is ☒ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

DETAILED ACTION

Election/Restriction

1. Applicant's traversal regarding the withdrawal of claim 11 is persuasive. This claim is examined below.

Priority

2. Certified copies of the priority document are received and made of record.

Treatment of Claims Based on Prior Art

3. 35 USC 103(a) states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Obviousness under 35 USC 103(a) is determined against a background established by the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), which are summarized in items 1-4 below.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6, 11, 15, 20-21 are rejected under 35 USC 103(a) as being unpatentable over Haba (US 6188028, hereafter Haba).

Haba discloses layers (102) in figure 2 which have positioning formations (140) and corresponding depressions (122), wherein the formations of one layer engage the depression of another layer so that the layers are precisely positioned. Conductor grooves are formed on the layers as shown in figure (1).

Haba discloses the claimed invention except for specifying that the formations and conductors are of "micro" size. Nevertheless, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to make the size of the device of Haba micro size for small-size applications, because reduction of size of electrical components is old and well known. Further, it has been held that a change in size is generally within the level of ordinary skill. *In re Rose*, 105 USPQ 237.

Claims 3 and 5: The protrusion of Haba is not exactly in the shape of a pyramid: it has a stem portion. Nevertheless, Haba discloses various shapes for the this purpose. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the protrusions of Haba in the shape of pyramids, because Haba discloses that the selection of shape is a matter of design choice and applicant has provided no indication that the pyramid shape is but an arbitrary selection of shape. Further, the shape of the protrusions of Haba and the pyramid shape are

functionally equivalent in the device of Haba and in the claimed invention.

Claim 11: Haba discloses the claimed invention except for identifying the shape of the cross section of the conductor grooves. Nevertheless, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to make the conductor grooves of Haba rectangular to allow insertion of flat conductors onto the board layers, this being old and well known in the art.

Claim 20: Element (116) is a conductive.

Claim 21: Haba does not disclose contact openings (filled vias) extending through the layers. Nevertheless, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to form filled vias in the layers to interconnect the circuit lines of one layer to another layer, because connection of circuit lines of different levels by filled vias is old and well known.

Allowable Subject Matter

6. Claim 15 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

The prior art does not suggest the cooling groove and heat sink in the claimed combination.

Response to Arguments


7. Applicant's arguments have been carefully reviewed, but are not persuasive.

Applicant has several arguments that the product of Haba was formed differently than the product of the claimed invention. Nevertheless, the two products are identical. When the product of the claim is the same as the product of the prior art, the method of making cannot patentably distinguish such a product. See MPEP 2113.

Applicant's last argument is that the projections of Haba cannot allow for precise positioning of the boards on each other due to the shape and configuration of the projections. This argument is moot because the shape and configuration of the projections is not claimed to a degree of specificity that distinguishes the claim from the prior art projections.

Closing

8. Any inquiries related to the examination of this application should be directed to Ex. K. Cuneo at (703) 308-1233 or her supervisor SPE D. Talbott at (703) 305-9883. Inquiries of a general nature should be directed to the receptionist of Group 2800 at (703) 308-0956. The fax numbers for Group 2800 are (703) 308-7722 and 7724.



K. Cuneo
Primary Examiner
August 11, 2002